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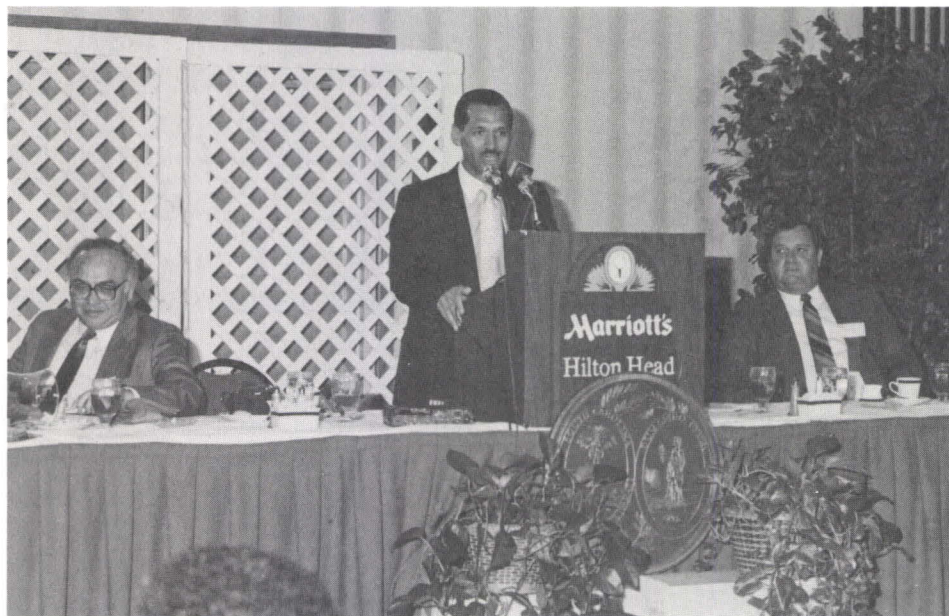
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Palmetto AVIATION

Volume 38, Number 10

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December 1986



Astronaut Col. Charles Bolden addresses the participants at this year's Ninth Annual Airports Conference.

Astronaut Tells It Like It Was

There will always be problems with space flight in general and space shuttles, space stations and orbital-maneuvering vehicles in particular because of high technology.

That according to shuttle astronaut Col. Charles Bolden is why NASA is currently deep into a program of critical reassessment and evaluation following the Challenger accident earlier this year.

Col. Bolden, an A-6 pilot in the Marine Corps prior to joining NASA, was the pilot of one of the last shuttle missions before the Challenger disaster.

Col. Bolden made his comments as the keynote speaker at the Ninth Annual Airports Conference held November 12-14 at Marriott's Hilton Head Resort.

During his address, Col. Bolden candidly discussed failings in the NASA program prior to the loss of Challenger, and

the efforts to get "back on track."

Col. Bolden said problems in the program stemmed mainly from a general lack of communication.

"The original goal was 60 flights a year. That's more than one a week," he said. "And that was to be accomplished with only four shuttles. I think we all knew we couldn't do it, but no one ever stopped and said 'We can't do this'."

Col. Bolden said the first thing NASA has learned during the reassessment is that you set goals, then periodically and hopefully frequently reassess those goals.

"You ask, 'What assets do I have; people, money, and material. What did I plan to do and how far can I go given what I have?' NASA didn't do that."

"We did not reassess, we did not communicate. What we are doing now is set-

(Continued on Page 7)

Aeronautics Hangar To Be Named For Retiring Commissioner

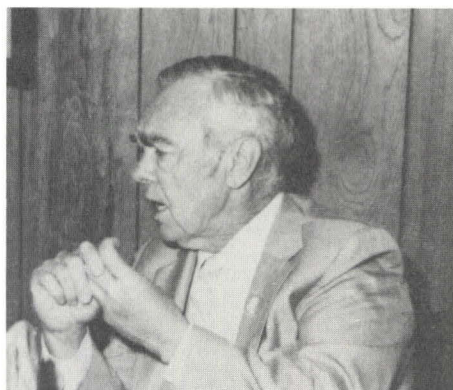
Commissioner Joe Wilder was appointed a commissioner to the South Carolina Aeronautics Commission in 1952. He retired from that job in October of 1986, after more than 30 years of service. He served as the Commission Chairman from 1978 until 1982.

In recognition of that long and distinguished service record, the Aeronautics Commission voted unanimously during its last meeting to name the aviation maintenance hangar at Commission headquarters in his honor. The facility is located at the Columbia Metropolitan Airport.

During his tenure on the Commission, the world of aviation grew and changed at a rate that almost boggles the mind. South Carolina's aviation community has kept pace with the national trend, more often than not exceeding the rate of its neighboring states in the Southeast.

Commissioner Wilder was instrumental in nearly all of the advancements seen during these thirty years, but typical of his modest personality considers very few of them as personally noteworthy.

(Continued on Page 7)



Retired Commissioner Joe Wilder



PALMETTO AVIATION is an official publication of the South Carolina Aeronautics Commission. It is designed to inform members of the aviation community, and others interested in aviation, of local developments in aviation and aviation facilities and to keep readers abreast of national and international trends in aviation.

The Aeronautics Commission is a state agency created in 1935 by the S.C. General Assembly to foster and promote air commerce within the state.

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FAA Proposes Rule Changes in Aircraft Markings

By H.M. Burwell, Esquire*

Recently the FAA proposed modifications to aircraft marking rules to help identify aircraft used in smuggling drugs. Those rules will affect markings and aircraft documentation.

Since 1981 aircraft have been required to have 12-inch national and registration marks. However, smaller markings were "grandfathered" until the aircraft was repainted or the registration was changed. The new marking rule would require 12-inch markings when an aircraft was in an Air Defense Identification Zone or Defense Early Warning Identification Zone where law enforcement officers may attempt air-to-air identification.

Another rule change would require all aircraft to have an identification plate

mounted on the exterior of the aircraft. The plate would have to be legible to a person outside the aircraft in order that the serial number could be verified against the FAA registration.

Lastly, aircraft operators with modified or supplemental fuel tanks in the passenger or baggage compartments would be required to carry documentation demonstrating the tanks were installed in compliance with FAA regulations. Operators which failed to obtain the documentation after installation or modification of fuel tanks would be suspect.

**Mr. Burwell is a member of the Barringer, Allen, Pinnix & Burwell law firm in the Greenville, S.C. office.*

From The Editor...

Merry Christmas! If you were unfortunate enough to miss this year's Airports Conference at Hilton Head, you missed a good one. With over 200 registrations, it was easily the largest conference so far.

From all indication, everybody enjoyed themselves and hopefully took home with them several ideas to improve their operations.

Col. Charles Bolden was the hit of the conference. Not only did he impress everyone with his presentation at the Thursday luncheon, but he remained over and attended the cookout that evening. Col. Bolden graciously posed for pictures and answered any and all questions late into the evening.

Some of the changes to the newsletter that were mentioned last month are about to be implemented. First, in an effort to get the newsletter out on time, a deadline for submitting information will have to be set. If you have news or articles or any other information for the newsletter, we *must* have it no later than the 10th of the month preceding the next issue. For example: if you wish something in February's issue, we need it no later than January 10th.

We will try this deadline for awhile and see how it works. We may have to adjust it later, but for now mark your calendars on the 10th.

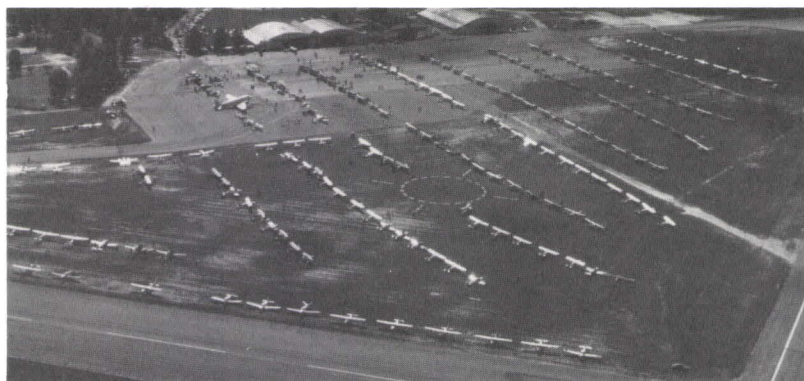
You will notice in this issue a section called Instructors Corner. This is a subject many of you requested in the survey. It is a great idea, but I am not a CFI, so in order to continue it I need some help from those who are. If you are a CFI please take the time to jot down a short lesson or two and send it along. Hopefully a back library of them can be started and we can publish one a month for the next several years.

Articles on maintenance such as Instructors Corner have also been requested, so anyone with a leaning in that direction we need your help also.

Of course we are always interested in your meetings, fly-ins, reunions, conferences, etc. Plan early and get us the information. We cannot promise to use everything every time, but we will certainly consider it.

Again, remember the new deadline and keep in touch.

Merry Christmas and Fly Safe.



Trophies Awarded At EAA Fall Fly-In

Over 400 aircraft converged on Camden's Woodward Field back in October for the EAA Chapter 3 tenth annual fall fly-in. On display were numerous Classic and Antique aircraft as well as Warbirds such as Stearman PT-17s, North American AT-6s and a P-51 Mustang.

Award winners, from the 166 registered entrants from eight states, were announced at a banquet featuring Captain Jan Plessman from Holland. Captain Plessman is a pilot for KLM who flew a Douglas DC-2 from England to Australia in 1984 as a reenactment of a race over the same route in 1934. Trophies awarded were:

Experimentals

Composite: P-47 1/2 scale, Dan Linkous, Sumter, SC.

Fabric: Emeraude, Merle Lilly, Sarasota, FL.

Metal: Thorpe T-18, John Whittington, Roland, NC.

Classics

0-65 hp: Luscombe 8A, Kenneth Bryant,

Ashboro, NC.

66-85 hp: Ercoupe, Frank Glynn, Crofton, MD.

86-150 hp: Swift, Billy and Geraldine Jennings, Dalton, GA.

151-600 hp: Stenson St. Wagon, Jim Clarkson, Tucker, GA.

Costum Classic: Swift, Bud Brown, Royston, GA.

Antiques

Silver Age: Waco RNF, Barbara Kit-chens, Milner, GA.

Contemporary: Porterfield, Walter and Ray Carson, Columbia, SC.

Custom: Piper J-3, Ace Tuttle, Madison, NC.

Warbird: Stearman, Phil Essey, Laurin-burg, NC.

Grand Champions

Classic: Luscombe, Jim Zazas, Carthage, NC.

Antique: Culver Cadet, Susan Dusen-bury, Greensboro, NC.

Rarest: Fleet Model 2. Stan Sweiker, St. Marys City, MD.

Breakfast Club



Dec. 14 Sumter Municipal, Sumter

Dec. 28 Greenville Downtown Greenville

Jan. 11 Dorchester County Summerville

Jan. 25 To Be Announced At Summerville

Hobson Named Maintenance Supervisor

"Col." William E. Hobson has been named by the Aeronautics Commission as the new state airports maintenance supervisor.

Hobson comes to the commission after more than 26 years of service with IRM Insurance as the Resident Field Representative (engineering) and Senior Loss Control Specialist.

Hobson is the former commander of the S.C. Wing of the Civil Air Patrol and is a registered professional engineer in fire protection engineering.

The maintenance supervisor is responsible for coordinating state airport maintenance personnel and equipment.

INSTRUCTOR'S CORNER

Why Use Flaps on Light Airplanes?

**By Gerold Ellsworth,
CFII Condor Flight School**

If you are from the old school (and some of the new ones), you were probably taught to land without flaps. You know how it is done...abeam the landing point, pull carburetor heat, reduce the throttle all the way and glide in like a big bird.

This method does have some merit when used in conjunction with emergency landing training, but for normal land-

ings, I think flaps should be used and here is why.

1) By making a power-on approach with flaps, you can make 90 degree turns to base and final giving you a better view of the traffic pattern and landing area.

2) Flaps give you a steeper approach allowing higher altitude on final.

3) Flaps allow a slower touchdown speed resulting in a shorter landing roll thus resulting in less wear on tires and brakes.

4) Using flaps keeps you in tune for short field landings.

5) We all know what happens to metal when you cool it fast. The air-cooled aircraft engine does not have water flowing through it to stabilize the temperature, so when you pull the throttle all the way back and glide in you are making the engine shrink with pain, while a power-on approach with flaps allows a gradual cooling of the engine.

With all these benefits, shouldn't you be using flaps?

Airport Radar Service Areas Proposed For Columbia And Spartanburg

The Federal Aviation Administration, concerned about the potential for another disaster such as the one at Cerritos last summer, is looking at several alternatives to lessen the risk of midair collisions at major airports.

As part of this program, the Department of Transportation has published a notice that proposes to establish Airport Radar Service Areas (ARSA) at two locations in South Carolina—Columbia Metro and Greer Greenville-Spartanburg. Each location is a public airport at which a non-regulatory Terminal Radar

Service Area (TRSA) is currently in effect.

The FAA maintains that implementation of ARSA procedures at these sites would promote the efficient control of air traffic and reduce the risk of midairs in the terminal areas.

What do you think? You can voice your opinion and concerns at two informal airspace meetings at locations and times below, or in writing before January 12, 1987.

****Columbia Metropolitan Airport**

Date: Dec. 11 - Time: 7:30 p.m.

Location: Airport terminal building

****Greer Greenville-Spartanburg Airport**

Date: Dec. 10 - Time: 7:00 p.m.

Location: Greenville Tech, library auditorium

Or write to (in triplicate):

F.A.A.

Office of Chief Counsel

Atten: Rules Docket AGC-204,

Aerospace Docket No. 86-AWA-39

800 Independence Ave, SW

Washington, D.C. 20591

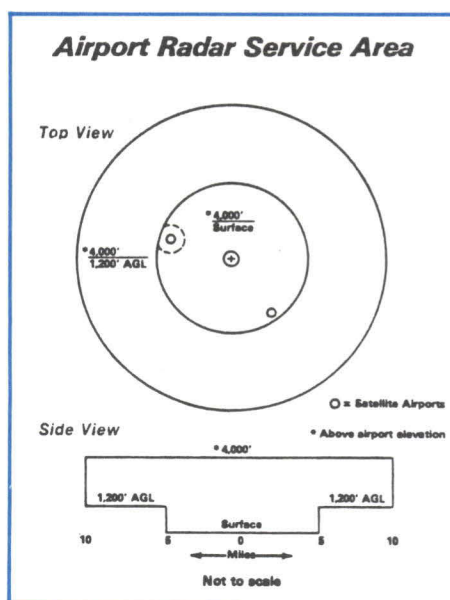
What Is An Airport Radar Service Area???

That's great! Just what we need—another chunk of airspace gone! Or is it? What exactly is an ARSA? Who wants it? How is it going to affect us as pilots?

Basically, ARSA (Airport Radar Service Area) is an FAA attempt to clean up the familiar TRSA. The goal is more uniformity among the over 140 possible ARSA locations in dimensions and ATC procedures.

Every user group of the ATC system wants something different—the big guys want positive control everywhere, and the little guys want no or minimum control. ARSA is an attempt at finding a middle ground between the two extremes.

The ARSA is cylindrical in shape, beginning at the surface with a 5 nautical



mile radius. At 1200 AGL the cylinder expands to a 10 nautical mile radius and extends upward to 4000 AGL. The ARSA is surrounded by an outer area that continues to 20 miles from the primary airport and extends upward to the upper limit of the approach control airspace.

Inbound or overflights *must* establish and maintain two-way radio contact with approach control prior to entering the ARSA. Departures will contact departure control in the usual manner, and satellite airport departures must establish radio contact as soon as practical. VFR flights can expect the following services: sequencing for landing, safety advisories, traffic advisories and conflict resolution. IFR flights will notice little change.

Pot-Smoking Pilot May Miss Runway

Pot-smoking pilots suffered impaired flying ability a full day after they used marijuana — and one even missed a simulated runway — although they believed their performance was not harmed, a study found.

While the preliminary study involved only 10 pilots, it suggested that even experienced aviators "had better stay out of a plane for at least 24 hours" after smoking marijuana, said Stanford University psychiatrist Dr. Jerome Yesavage.

"I'd watch out for the guy who smokes the night before and then flies in the morning, particularly in bad weather conditions," said Yesavage, who also is a licensed commercial pilot and chief of psychiatric intensive care at the Palo Alto Veterans Administration Medical Center.

The study, published in the *American Journal of Psychiatry*, involved 10 licensed private pilots recruited from Palo Alto's airport; then trained for eight hours on a flight simulator at the Veterans Administration hospital.

All had smoked pot previously, but were not daily users.

The researchers tested each pilot's ability to use the simulator to take off,

climb to 700 feet, make two turns; then descend and land. The test was repeated at one, four, and 24 hours after each pilot smoked a cigarette containing 19 milligrams of THC, the active ingredient in marijuana.

One hour after the pilots smoked pot, "there was a real question of getting back to the ground," Yesavage said. "At four hours, people were still pretty shaky."

Even 24 hours after smoking the drug, the pilots still showed significant impairment of flying ability—including the ability to land the simulated flight on a runway centerline—even though the pilots believed their performance as unimpaired," Yesavage said.



New Commissioners: (L to R) Richard McClellion Jr., Wallace A. Mullinax Sr., and Curtis Graves.

New Commissioners Named

The South Carolina Aeronautics Commission will be under new leadership this coming year as three retiring commissioners have been replaced with three new members.

Commissioners Joe Wilder, Ralph Schmidt and Michael Laughlin ended their distinguished service with the Commission in October. We will have more on these public servants in the next few issues.

Replacing these retiring commissioners are Wallace A. Mullinax, Sr. of Greenville, Curtis Graves of Denmark, and Richard McClellion of Anderson.

Commissioner Mullinax is vice president in charge of sales at WESC radio in Greenville and is the owner of WMTY radio in Greenwood. He served in the U.S. Navy during W.W.II and is a 1949 graduate of Furman University.

Mullinax has served as president of the Greenville Sales and Marketing Executives Assoc. and the S.C. Broadcasters Assoc. His public service includes work on numerous boards and foundations in Greenville as well as vice chair-

man of the Greenville County Council.

Mullinax has had his private pilot's license since 1971.

Commissioner McClellion graduated from Furman in 1968. He received a law degree from USC and was admitted to the S.C. Bar in 1971. He is presently engaged in the construction and leasing of industrial, commercial and residential properties in S.C., N.C. and GA.

Commissioner McClellion has a multi-engine rating and has been a private pilot since 1974.

Commissioner Graves is a graduate of the University of Wyoming, and holds a Master's degree of Education from S.C. State College. He is a retired Air Force Lt. Col. whose assignments included Texas, Wyoming, Utah, Libya and South Vietnam. He has received several awards and decorations, including the Bronze Star and the Air Force's Meritorious Service and Commendations Medals.

Commissioner Graves is currently the staff engineer for long range planning for the E.I. Du Pont Savannah River Plant in Aiken.

Walterboro Seeking FBO

Walterboro-Colleton County Airport Commission is seeking full-service FBO proposals for Walterboro Municipal Airport. Available January 1987. Includes terminal building, maintenance hangar, tie-downs, fuel operation and mobile home. Submit written proposals to P. O. Box 709, Walterboro, SC 29488. For more information contact Chris Bickley at (803) 549-2545.

Airport Grants Approved By Aeronautics Commission

During its last two monthly meetings, the Aeronautics Commission voted to approve funding for the following projects:

Bryant Field, Rock Hill: Airfield drainage improvements; construction of aircraft parking ramp and taxiway E; installation of medium intensity taxiway lights. Total: \$46,429.

Conway-Horry County: Apron lighting and taxiway markings. Total: \$4,505.

Florence County: Emergency rehab of HIRLs and MITLs on taxiways; apron and airfield drainage improvements. Total: \$5,427.

Greenville Downtown: Strengthen terminal apron, FBO apron and connecting taxiways; install boundary fence for ILS. Total \$15,000.

Marion County: Repair runways, taxiways, turnarounds and aprons; remark all pavement; extend runway safety overruns. Total \$17,175.

Cheraw: Easement acquisition and obstruction clearing. Total: \$2,860.

Hartsville: Installation of a PAPI II system on runway 2. Total: \$2,097.

Merry Christmas

***** NOTICE *****

Frequency Changes
Effective Immediately

Orangeburg Unicom Freq
122.7

East Cooper Unicom Freq
122.7

***** NOTICE *****



Jay Smith and Bill Pierson register for the conference with Commission representatives Dee Vickery and Bill Hobson.



This year's conference was attended by nine vendors from as far away as Michigan and Kansas.

South Carolina Airports Conference 1986



Thursday's luncheon was attended by approximately 130 people, who enjoyed the food as well as Col. Bolden's slide show.



Conference functions offered participants the chance to gather and share ideas and stories.



The cookout featured a variety of seafoods as well as BBQ chicken, Beaufort stew and roast sirloin.



Bill Cox, Bill McGill and Jay Smith enjoy a batch of steamed oysters at the Thursday cookout.

Astronaut

(Continued from Page 1)

ting up channels of communications that hopefully we will fully utilize."

As an example of NASA's mismanagement, Col. Bolden pointed out that the shuttle was originally going to be much lighter and fly back to earth much slower than it does.

"The braking system on board is good for a 170,000-pound vehicle, but we don't have any (that are that lightweight). Our shuttles weigh in excess of 190,000 pounds."

"When designing the shuttle, we never envisioned flying it back to earth weighing 245,000 pounds. It wasn't designed for that weight."

Col. Bolden enthralled his audience of more than 150 as he narrated a slide show with his personal experiences in space.

"I recommend space to everybody. If you ever get an invitation to go, take it."

"In this picture," he said of a slide of the crew floating around the cabin, "it looks like we were having fun. Well, we were."

During his flight, Col. Bolden and his crew were able to retrieve, repair and redeploy a faulty satellite that now operates better than ever before.

Col. Bolden's flight made 196 orbits traveling at a speed of 175,000 mph and experienced 16 sunrises and sunsets

each day. "It made it interesting when you wanted to sleep," he said.

On his next flight, in late 1988, Col. Bolden is scheduled to deploy the Hubble Space Telescope which will enable astronomers to look 14 billion light years into space, seven times further than they can with earthbound telescopes.

"To give you an example," he said, "we would be able to see a penlight on the face of the moon from a station on earth."

Despite the problems inherent in space flight, Col. Bolden is optimistic about the future of space exploration and development.

"The future isn't 30 or 40 years from now," Bolden said, "it's right now. By 1990, the United States will be flying orbital-maneuvering vehicles, the first step to the utilization of a space station."

"I'm looking forward to being a member of NASA for a long, long time," Bolden said. "We will be a far better organization than we were."

With the theme of "Airport Management and Economics," state Senator James Waddell opened the conference discussing South Carolina's economic outlook for the next five years.

Richard Henson, president of Henson Airlines, addressed the assembly regarding the growth of commuter operations and the commuter industry in general.

This year's conference program includ-

ed such topics as "Airports and Economics," "Land Use Planning," "Airport Liability and Tort Reform," "Minority Participation in Airport Development," "Organizing Airshows" and "FAA Listening Sessions."

FAA Seeking Controllers

The Federal Aviation Administration is actively seeking applicants for air traffic controllers.

The *Air Traffic Controllers* announcement is open until further notice. Starting salary is \$17,824 per year. To qualify, an applicant must pass the written test with a score of 75.1 or above, and must have 3 years of general experience, or 4 years of college, or any combination of education and experience equaling 3 years. Once selected, all new appointees must pass a rigorous medical examination before 7-16 weeks of formal screening and training at the FAA Academy in Oklahoma City.

Applications for air traffic controller may be obtained from the U.S. Office of Personnel Management, Kansas City Area Office, Kansas City, Missouri 64106, telephone (816) 374-5702.

Florence County Airport Director Resigns

Ron Bowling, director of the Florence City-County Airport, has resigned and the Airport Commission is looking for a replacement.

Bowling submitted his resignation last month and it will be effective December 22. He said that his plans for the future are "confidential."

Bowling was named airport director in August 1983 and said he had "probably learned more working here" than he had in eight and a half years at larger airports.

Bowling said his resignation had been in the works for several months and he was leaving with absolutely "no hard feelings." He said that with the support of the city and county a lot has been accomplished in the three and a half years he had been there.

Bowling said he was grateful to the people of Florence county for having faith in their airport and for contributing much in its "rejuvenation."

Retiring Commissioner...

(Continued from Page 1)

Heading the list of accomplishments he considers worth remembering is the establishment of the South Carolina Airports System, which he calls second to none. Over the last thirty years the Commission has been responsible for the construction or improvement of over seventy airports in South Carolina.

Commissioner Wilder also believes that the improving and upgrading of the flight equipment and aircraft was essential. He believes that to do the best job

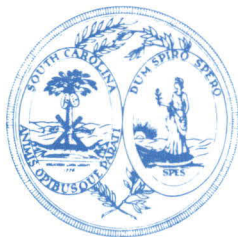
possible, one needs the best equipment possible.

Finally, Commissioner Wilder takes particular pride in the move from Owens Field to the new Commission headquarters at the Columbia Metropolitan Airport.

For over thirty years, Commissioner Joe Wilder has served the aviation community of South Carolina. He now takes that talent and dedication to the Statehouse in Columbia to serve the people of Barnwell County in the House of Representatives.

FAA Produces Tape on Ground Vehicle Operation

The FAA has produced a videotape, "Dangerously Close", that is intended to heighten the aviation community's awareness of the problem of unauthorized runway crossings by ground vehicles. The 20 minute video which was produced as part of the FAA's Back to Basics Program consists of three scenarios that are based upon actual occurrences. A copy of the video may be borrowed from any FAA Airports Division or Airports District Office and may be reproduced as long as the copy will not be used for commercial purposes.



**SOUTH CAROLINA
AERONAUTICS COMMISSION**
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Taking Your Fuel For Granted

Incredibly, engine fuel exhaustion, or starvation, continues to be a major cause of aircraft accidents. True enough, some of these accidents occur as a result of equipment failure; but, for the most part pilot deficiencies play a major role here. An examination of the problem points up deficiencies in two areas: inadequate preflight planning and aircraft inspection, and improper in-flight fuel and systems management.

FAR's part 91 minimum fuel requirements for VFR/IFR are *absolute* minimums. Whenever there is a change from absolutely ideal flight conditions, pilots should increase their minimum fuel reserve requirements.

The pilot who depends on the aircraft's panel fuel gauges alone to determine fuel quantity is inviting what might well be his/her life's most serious survival risk. Determining that there is sufficient fuel on board includes looking into the tanks and

measuring with a stick, if necessary, to absolutely insure adequate quantities. Determining how much fuel is on board is, in fact, determining how long an aircraft can remain in flight. An excellent pre-flight question for fuel planning for every flight is "How long can I remain in flight versus how long am I going to have to fly?"

Adequate pre-flight inspection demands a good inspection of the fuel system as well as the fuel itself. Is everything in the tanks clean fuel of the proper grade, or is it contaminated with dirt, water, jet fuel if applicable, or any other foreign matter? Fuel sampling, as outlined in the FAA approved flight manual for that aircraft should be accomplished prior to each flight. Is the fuel system in good order? Are the fuel pumps/pressures as prescribed? Can the tanks be switched, once in flight, as required?

Proper in-flight fuel management requires that the appropriate tank be on line for the operation being conducted, along with the proper auxiliary fuel pump usage and fuel mixture control settings as outlined in the operating flight manual. Progress of the flight must be closely monitored as head winds can make continuation of a flight to the planned destination impossible or unnecessarily hazardous. Including an unscheduled fuel stop, under these conditions might well be the best decision you ever made as a pilot.

Far too often, some of us in aviation are influenced by our daily association with automobiles. Who ever checks the quality of their car's fuel? We all know the gas gauge works, and after all, we can always "hitch" a ride to the next station if we fumble...

This publication is printed and distributed by the South Carolina Aeronautics Commission in the interest of aviation safety and to foster growth of responsible aviation in the state. The viewpoints expressed in articles credited to specific sources are presented as the viewpoints of those writers and do not necessarily reflect the opinion of the South Carolina Aeronautics Commission.